

**WEST**

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L2: Entry 4 of 13

File: DWPI

Jun 28, 2000

DERWENT-ACC-NO: 2000-414552

DERWENT-WEEK: 200036

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TITLE: Reinforcing mat, particularly for sound insulation in vehicle interiors, has a layer of fibers with polymer layers each side, an adhesive overlay on at least one outer side, and perforations extending through the mat

INVENTOR: ERICKSON, B L; MICHAEL, R S

PATENT-ASSIGNEE:

ASSIGNEE

CODE

PRINCE TECHNOLOGY CORP

PRINN

PRIORITY-DATA: 1998US-0217181 (December 21, 1998)

PATENT-FAMILY:

| PUB-NO        | PUB-DATE      | LANGUAGE | PAGES | MAIN-IPC   |
|---------------|---------------|----------|-------|------------|
| EP 1013414 A2 | June 28, 2000 | E        | 007   | B32B027/12 |

DESIGNATED-STATES: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL  
PT RO SE SI

APPLICATION-DATA:

| PUB-NO       | APPL-DATE         | APPL-NO        | DESCRIPTOR |
|--------------|-------------------|----------------|------------|
| EP 1013414A2 | November 15, 1999 | 1999EP-0122709 | N/A        |

INT-CL (IPC): B32B 3/24; B32B 7/12; B32B 27/12; B32B 31/30; B60R 13/02

ABSTRACTED-PUB-NO: EP 1013414A

BASIC-ABSTRACT:

NOVELTY - Reinforcing mat (10) has a layer of fibers (12) with a polymer layer (14,16) on each side to encapsulate the fibers, an adhesive overlay (18) on at least one outer surface of the assembly, and perforations through the fiber layer, the polymer layers, and the adhesive layer.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (i) A laminated board comprising a core layer and first and second reinforcing mats orientated with adhesive layers engaging the core layer and being bonded to form the laminated board; and (ii) the method of making a reinforcing mat.

Preferred Features: The fibers of the mat can be randomly oriented and of natural, organic, or inorganic material of micro denier to 100 denier. The perforations can be punched or vacuum formed, random or non-random, of 0.5 to 10 mm diameter and provide 5 to 95% of the area at a density of 1 to 250 holes per.sq.inch. The polymer layers and the adhesive can be applied to the fibers by coextrusion. A decorative layer can be applied to one surface of the laminated board.

USE - Particularly in the manufacture of vehicle head liners or interior panels.

ADVANTAGE - Reinforcing mat is easily formed and attached to, e.g., semi-rigid

polyurethane board to form a sound absorbing structure, in which the reinforcing mats, being perforated, do not degrade the sound absorption.

DESCRIPTION OF DRAWING(S) - The figure shows the mat.

Reinforcing mat 10

Fiber layer 12

Polymer layers 14,16

Adhesive layer 18

CHOSEN-DRAWING: Dwg.1/6

TITLE-TERMS: REINFORCED MAT SOUND INSULATE VEHICLE INTERIOR LAYER POLYMER LAYER  
SIDE ADHESIVE OVERLAY ONE OUTER SIDE PERFORATION EXTEND THROUGH MAT

DERWENT-CLASS: A32 A95 P73 Q17

CPI-CODES: A12-S08D3; A12-T04B;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1] 018 ; R00326 G0044 G0033 G0022 D01 D02 D12 D10 D51 D53 D58 D82 ; R00964 G0044 G0033 G0022 D01 D02 D12 D10 D51 D53 D58 D83 ; H0000 ; K9892 ; P1150 ; P1161 ; P1343 Polymer Index [1.2] 018 ; G0033\*R G0022 D01 D02 D51 D53 ; H0011\*R ; K9892 ; H0088 H0011 ; P1150 Polymer Index [1.3] 018 ; N9999 N5981 N5970 ; N9999 N7192 N7023 Polymer Index [1.4] 018 ; ND01 ; Q9999 Q6622 Q6611 ; Q9999 Q9234 Q9212 ; Q9999 Q9289 Q9212 ; Q9999 Q7829 Q7818 ; K9892 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 Polymer Index [1.5] 018 ; A999 A419 ; S9999 S1070\*R ; S9999 S1183 S1161 S1070 ; B9999 B5254 B5243 B4740 Polymer Index [1.6] 018 ; A999 A033 Polymer Index [2.1] 018 ; A999 A782 ; A999 A033 ; H0317 ; H0328 Polymer Index [2.2] 018 ; K9518 K9483 ; K9698 K9676 ; K9712 K9676 ; Q9999 Q7523 ; N9999 N6122 N6097 ; N9999 N6304 N6268 Polymer Index [3.1] 018 ; P1592\*R F77 D01 ; S9999 S1309\*R ; S9999 S1581 Polymer Index [3.2] 018 ; B9999 B3930\*R B3838 B3747 Polymer Index [3.3] 018 ; ND01 ; Q9999 Q6622 Q6611 ; Q9999 Q9234 Q9212 ; Q9999 Q9289 Q9212 ; Q9999 Q7829 Q7818 ; K9892 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2000-125761

Non-CPI Secondary Accession Numbers: N2000-309758

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File: DWPI

Dec 13, 2000

DERWENT-ACC-NO: 1999-527830  
DERWENT-WEEK: 200066  
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TITLE: Sound absorbent thin layer laminate useful for noise reduction in motor vehicles

INVENTOR: ALTS, T; VANBEMMEL, W R ; VULPITTA, A C

PATENT-ASSIGNEE:

ASSIGNEE

RIETER AUTOMOTIVE INT AG

CODE

RIET

PRIORITY-DATA: 1998CH-0002270 (November 12, 1998), 1998CH-0000501 (March 3, 1998)

PATENT-FAMILY:

| PUB-NO        | PUB-DATE           | LANGUAGE | PAGES | MAIN-IPC   |
|---------------|--------------------|----------|-------|------------|
| EP 1058618 A1 | December 13, 2000  | G        | 000   | B32B005/24 |
| WO 9944817 A1 | September 10, 1999 | G        | 018   | B32B005/24 |

DESIGNATED-STATES: BE CH DE ES FR GB IT LI NL PT SE JP US AT BE CH CY DE DK ES FI  
FR GB GR IE IT LU MC NL PT SE

APPLICATION-DATA:

| PUB-NO       | APPL-DATE     | APPL-NO        | DESCRIPTOR |
|--------------|---------------|----------------|------------|
| EP 1058618A1 | March 1, 1999 | 1999EP-0904680 | N/A        |
| EP 1058618A1 | March 1, 1999 | 1999WO-CH00094 | N/A        |
| EP 1058618A1 |               | WO 9944817     | Based on   |
| WO 9944817A1 | March 1, 1999 | 1999WO-CH00094 | N/A        |

INT-CL (IPC): B32B 5/24; B32B 5/26; B60R 13/08; D04H 1/56; G10K 11/168

ABSTRACTED-PUB-NO: WO 9944817A

BASIC-ABSTRACT:

NOVELTY - A sound absorbent laminate, which comprises an open porous fibrous or foam backing layer and a further open porous melt-blown microfiber layer and which has a specified air flow resistance, is new.

DETAILED DESCRIPTION - A sound absorbent thin layer laminate has an air flow resistance  $R_t$  of 500-4000  $\text{Ns/m}^3$  (exclusive) and comprises (a) an open porous backing layer consisting of a first fibrous layer, especially of lightly compressed nonwoven fabric of less than 2000  $\text{g/m}^2$  weight and less than 50 mm thickness, or an open porous foam layer, especially of an ultra-lightweight plastic foam of 16-32  $\text{kg/m}^3$  density and at least 6 mm thickness; and (b) a further open porous fibrous layer of melt-blown microfibers of 1-10 (especially 2-5)  $\mu\text{m}$  diameter. An INDEPENDENT CLAIM is also included for production of the above laminate by using a sprayed adhesive to fix the microfiber layer onto the backing layer.

USE - For noise reduction in motor vehicles, especially for lining instrument

panels, floors, doors, roofs, boot compartments and engine compartments (claimed).

ADVANTAGE - The ultra-light laminate has high acoustic insulation efficiency (especially a high low frequency sound absorption coefficient) and a certain structural stability, is water repellant and is simple and inexpensive to manufacture.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of a method of producing the new laminate.

Backing material web 4

Adhesive spraying 9

Melt-blown fiber web 11

CHOSEN-DRAWING: Dwg.2/2

TITLE-TERMS: SOUND ABSORB THIN LAYER LAMINATE USEFUL NOISE REDUCE MOTOR VEHICLE

DERWENT-CLASS: A32 A93 A95 F04 F07 P73 P86 Q17

CPI-CODES: A12-R06; A12-T04B; F02-C01; F04-E03; F04-E06;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1] 018 ; P0000 Polymer Index [1.2] 018 ; ND01 ; ND07 ; N9999 N5721\*R ; K9574 K9483 ; K9518 K9483 ; K9676\*R ; K9698 K9676 ; K9701 K9676 ; N9999 N7192 N7023 ; Q9999 Q6622 Q6611 ; Q9999 Q9234 Q9212 ; Q9999 Q9289 Q9212 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 ; B9999 B5221 B4740 ; B9999 B4842 B4831 B4740 ; B9999 B3509 B3485 B3372 Polymer Index [1.3] 018 ; Q9999 Q6644\*R ; B9999 B5447 B5414 B5403 B5276 ; N9999 N7067 N7034 N7023 ; N9999 N7090 N7034 N7023 ; N9999 N7147 N7034 N7023 Polymer Index [2.1] 018 ; P1592\*R F77 D01 ; S9999 S1343 S1309 ; S9999 S1581 Polymer Index [2.2] 018 ; ND01 ; ND07 ; N9999 N5721\*R ; K9574 K9483 ; K9518 K9483 ; K9676\*R ; K9698 K9676 ; K9701 K9676 ; N9999 N7192 N7023 ; Q9999 Q6622 Q6611 ; Q9999 Q9234 Q9212 ; Q9999 Q9289 Q9212 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 ; B9999 B5221 B4740 ; B9999 B4842 B4831 B4740 ; B9999 B3509 B3485 B3372 Polymer Index [2.3] 018 ; K9712 K9676 ; Q9999 Q9132 Polymer Index [3.1] 018 ; R24078 R01852 G3634 G3623 D01 D03 D11 D10 D23 D22 D31 D42 D50 D76 D86 F24 F29 F26 F34 H0293 P0599 ; S9999 S1070\*R ; S9999 S1183 S1161 S1070 Polymer Index [3.2] 018 ; R01852\*R G3634 D01 D03 D11 D10 D23 D22 D31 D42 D50 D76 D86 F24 F29 F26 F34 H0293 P0599 G3623 ; S9999 S1070\*R ; S9999 S1183 S1161 S1070 Polymer Index [3.3] 018 ; P0839\*R F41 D01 D63 ; S9999 S1070\*R ; S9999 S1183 S1161 S1070 Polymer Index [3.4] 018 ; R00964 G0044 G0033 G0022 D01 D02 D12 D10 D51 D53 D58 D83 ; H0000 ; S9999 S1070\*R ; S9999 S1183 S1161 S1070 ; P1150 ; P1343 Polymer Index [3.5] 018 ; ND01 ; ND07 ; N9999 N5721\*R ; K9574 K9483 ; K9518 K9483 ; K9676\*R ; K9698 K9676 ; K9701 K9676 ; N9999 N7192 N7023 ; Q9999 Q6622 Q6611 ; Q9999 Q9234 Q9212 ; Q9999 Q9289 Q9212 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 ; B9999 B5221 B4740 ; B9999 B4842 B4831 B4740 ; B9999 B3509 B3485 B3372 Polymer Index [3.6] 018 ; K9712 K9676 ; N9999 N6906 ; Q9999 Q9132 Polymer Index [4.1] 018 ; S9999 S1070\*R ; S9999 S1105\*R S1070 ; S9999 S1183 S1161 S1070 ; H0317 ; H0328 Polymer Index [4.2] 018 ; ND01 ; ND07 ; N9999 N5721\*R ; K9574 K9483 ; K9518 K9483 ; K9676\*R ; K9698 K9676 ; K9701 K9676 ; N9999 N7192 N7023 ; Q9999 Q6622 Q6611 ; Q9999 Q9234 Q9212 ; Q9999 Q9289 Q9212 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 ; B9999 B5221 B4740 ; B9999 B4842 B4831 B4740 ; B9999 B3509 B3485 B3372 ; K9712 K9676 ; N9999 N6906 ; Q9999 Q9132 Polymer Index [4.3] 018 ; Q9999 Q6791 Polymer Index [5.1] 018 ; S9999 S1241 S1229 S1070 ; S9999 S1183 S1161 S1070 ; S9999 S1387 ; P0839\*R F41 D01 D63 Polymer Index [5.2] 018 ; S9999 S1241 S1229 S1070 ; S9999 S1183 S1161 S1070 ; S9999 S1387 ; P0635\*R F70 D01 Polymer Index [5.3] 018 ; G0033\*R G0022 D01 D02 D51 D53 ; S9999 S1241 S1229 S1070 ; S9999 S1183 S1161 S1070 ; S9999 S1387 ; H0000 ; H0011\*R ; P1150 Polymer Index [5.4] 018 ; R00964 G0044 G0033 G0022 D01 D02 D12 D10 D51 D53 D58 D83 ; S9999 S1241 S1229 S1070 ; S9999 S1183 S1161 S1070 ; S9999 S1387 ; H0000 ; P1150 ; P1343 Polymer Index [5.5] 018 ; ND01 ; ND07 ; N9999 N5721\*R ; K9574 K9483 ; K9518 K9483 ; K9676\*R ; K9698 K9676 ; K9701 K9676 ; N9999 N7192 N7023 ; Q9999 Q6622 Q6611 ; Q9999 Q9234 Q9212 ; Q9999 Q9289 Q9212 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 ; B9999 B5221 B4740 ; B9999 B4842 B4831 B4740 ; B9999 B3509 B3485 B3372 Polymer Index [5.6] 018 ; K9712 K9676 ; N9999 N6428 ; N9999 N6020 N6008 ; B9999 B5254 B5243 B4740 ; Q9999 Q9132

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1999-155228

Non-CPI Secondary Accession Numbers: N1999-390921

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L2: Entry 10 of 13

File: DWPI

May 1, 2000

DERWENT-ACC-NO: 1997-087411

DERWENT-WEEK: 200028

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TITLE: Acoustic insulation uses non-reinforced nonwoven web - made using organic fibres and heat bonded staple fibres

INVENTOR: KNOLL, R L; THOMPSON, D R

PATENT-ASSIGNEE:

ASSIGNEE

CODE

MINNESOTA MINING &amp; MFG CO

MINN

PRIORITY-DATA: 1995US-0000467 (June 23, 1995), 1996US-0669896 (June 21, 1996)

PATENT-FAMILY:

| PUB-NO        | PUB-DATE          | LANGUAGE | PAGES | MAIN-IPC   |
|---------------|-------------------|----------|-------|------------|
| ES 2143209 T3 | May 1, 2000       | N/A      | 000   | D04H001/54 |
| WO 9700989 A1 | January 9, 1997   | E        | 037   | D04H001/54 |
| AU 9662869 A  | January 22, 1997  | N/A      | 000   | D04H001/54 |
| EP 833973 A1  | April 8, 1998     | E        | 000   | D04H001/54 |
| US 5841081 A  | November 24, 1998 | N/A      | 000   | E04B001/82 |
| BR 9608987 A  | June 29, 1999     | N/A      | 000   | D04H001/54 |
| JP 11508328 W | July 21, 1999     | N/A      | 036   | D04H001/54 |
| EP 833973 B1  | March 15, 2000    | E        | 000   | D04H001/54 |
| DE 69607164 E | April 20, 2000    | N/A      | 000   | D04H001/54 |
| KR 99028289 A | April 15, 1999    | N/A      | 000   | D04H001/54 |

DESIGNATED-STATES: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU  
IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD  
SE SG SI SK TJ TM TR TT UA UG UZ VN AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS  
LU MC MW NL OA PT SD SE SZ UG DE ES FR GB IT SE DE ES FR GB IT SE

CITED-DOCUMENTS:EP 607946; US 100902

APPLICATION-DATA:

| PUB-NO       | APPL-DATE         | APPL-NO        | DESCRIPTOR  |
|--------------|-------------------|----------------|-------------|
| ES 2143209T3 | June 21, 1996     | 1996EP-0921729 | N/A         |
| ES 2143209T3 |                   | EP 833973      | Based on    |
| WO 9700989A1 | June 21, 1996     | 1996WO-US10661 | N/A         |
| AU 9662869A  | June 21, 1996     | 1996AU-0062869 | N/A         |
| AU 9662869A  |                   | WO 9700989     | Based on    |
| EP 833973A1  | June 21, 1996     | 1996EP-0921729 | N/A         |
| EP 833973A1  | June 21, 1996     | 1996WO-US10661 | N/A         |
| EP 833973A1  |                   | WO 9700989     | Based on    |
| US 5841081A  | June 23, 1995     | 1995US-0000467 | Provisional |
| US 5841081A  | June 21, 1996     | 1996US-0669896 | N/A         |
| BR 9608987A  | June 21, 1996     | 1996BR-0008987 | N/A         |
| BR 9608987A  | June 21, 1996     | 1996WO-US10661 | N/A         |
| BR 9608987A  |                   | WO 9700989     | Based on    |
| JP 11508328W | June 21, 1996     | 1996WO-US10661 | N/A         |
| JP 11508328W | June 21, 1996     | 1997JP-0503956 | N/A         |
| JP 11508328W |                   | WO 9700989     | Based on    |
| EP 833973B1  | June 21, 1996     | 1996EP-0921729 | N/A         |
| EP 833973B1  | June 21, 1996     | 1996WO-US10661 | N/A         |
| EP 833973B1  |                   | WO 9700989     | Based on    |
| DE 69607164E | June 21, 1996     | 1996DE-0607164 | N/A         |
| DE 69607164E | June 21, 1996     | 1996EP-0921729 | N/A         |
| DE 69607164E | June 21, 1996     | 1996WO-US10661 | N/A         |
| DE 69607164E |                   | EP 833973      | Based on    |
| DE 69607164E |                   | WO 9700989     | Based on    |
| KR 99028289A | June 21, 1996     | 1996WO-US10661 | N/A         |
| KR 99028289A | December 22, 1997 | 1997KR-0709603 | N/A         |
| KR 99028289A |                   | WO 9700989     | Based on    |

INT-CL (IPC): D04H 1/54; D04H 1/56; E04B 1/82; G10K 11/162

ABSTRACTED-PUB-NO: EP 833973B

BASIC-ABSTRACT:

A method for attenuating sound comprises the steps of providing an acoustical insulation which includes a non woven web of thickness over 0.5 cm. and density <250 kg/m<sup>3</sup>, contg. organic micro-fibres and bonded together heat activatable staple fibres, and positioning the acoustical insulation transversely between a source and receiver of sound.

USE - A method of sound insulation using a non woven web with organic micro-fibres and heat bonded staple fibres.

ADVANTAGE - the web has sufficient strength not to require reinforcement.

ABSTRACTED-PUB-NO:

US 5841081A

EQUIVALENT-ABSTRACTS:

A method for attenuating sound comprises the steps of providing an acoustical insulation which includes a non woven web of thickness over 0.5 cm. and density <250 kg/m<sup>3</sup>, contg. organic micro-fibres and bonded together heat activatable staple fibres, and positioning the acoustical insulation transversely between a source and receiver of sound.

USE - A method of sound insulation using a non woven web with organic micro-fibres and heat bonded staple fibres.

ADVANTAGE - the web has sufficient strength not to require reinforcement.

A method for attenuating sound comprises the steps of providing an acoustical insulation which includes a non woven web of thickness over 0.5 cm. and density <250 kg/m<sup>3</sup>, contg. organic micro-fibres and bonded together heat activatable staple fibres, and positioning the acoustical insulation transversely between a source and receiver of sound.

USE - A method of sound insulation using a non woven web with organic micro-fibres and heat bonded staple fibres.

ADVANTAGE - the web has sufficient strength not to require reinforcement.

WO 9700989A

CHOSEN-DRAWING: Dwg.7/7

TITLE-TERMS: ACOUSTIC INSULATE NON REINFORCED NONWOVEN WEB MADE ORGANIC FIBRE HEAT BOND STAPLE FIBRE

DERWENT-CLASS: A17 A23 A94 F04 P86 Q43

CPI-CODES: A12-R06; A12-S05G; F01-E09; F02-C01; F04-E06;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1] 018 ; R00964 G0044 G0033 G0022 D01 D02 D12 D10 D51 D53 D58 D83 ; H0000 ; S9999 S1183 S1161 S1070 ; S9999 S1241 S1229 S1070 ; P1150 ; P1343  
Polymer Index [1.2] 018 ; P0884 P1978 P0839 H0293 F41 D01 D11 D10 D19 D18 D31 D50 D63 D90 E21 E00 ; S9999 S1092 S1070 ; S9999 S1183 S1161 S1070 ; S9999 S1274 S1070  
Polymer Index [1.3] 018 ; ND01 ; Q9999 Q6622 Q6611 ; B9999 B4148 B4091 B3838 B3747 ; B9999 B5254 B5243 B4740 ; B9999 B5243\*R B4740 ; B9999 B4842 B4831 B4740 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 Polymer Index [2.1] 018 ; P0839\*R F41 D01 D63 ; S9999 S1138 S1116 S1105 S1070 ; S9999 S1183 S1161 S1070 ; S9999 S1274 S1070  
Polymer Index [2.2] 018 ; H0011\*R ; P0839\*R F41 D01 D63 ; S9999 S1127 S1116 S1105 S1070 ; S9999 S1183 S1161 S1070 ; S9999 S1274 S1070 Polymer Index [2.3] 018 ; ND01 ; Q9999 Q6622 Q6611 ; B9999 B4148 B4091 B3838 B3747 ; B9999 B5254 B5243 B4740 ; B9999 B5243\*R B4740 ; B9999 B4842 B4831 B4740 ; B9999 B3985 B3974 B3963 B3930 B3838 B3747 Polymer Index [2.4] 018 ; B9999 B5312 B5298 B5276

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1997-028512